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10/532,202	04/14/2005	Steffen Hasenzahl	032301.415	6755

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EXAMINER

GODENSCHWAGER, PETER F

ART UNIT	PAPER NUMBER
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1709

MAIL DATE	DELIVERY MODE
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10/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/532,202

Applicant(s)

HASENZAHN ET AL.

Examiner

Peter F. Godenschwager

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/14/2005, 10/28/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 6 is objected to because of the following informalities: the word alkylsilyl has been misspelled as "alkylsityl". Appropriate correction is required.

Claim Rejections - 35 USC § 112/101

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 provides for the use of a surface-modified and structure-modified pyrogenically prepared metalloid or metallic oxide, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Claim 3 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann et al. (US Pat. No. 5,959,005).

Hartmann et al. teaches a powder (pulverulent material) that may contain a silanized silica (surface modified metallic oxide) where the silica is pyrogenically prepared (1:14-15, 40-45, and 55-56).

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann et al. (US Pat. No. 5,959,005).

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Hartmann et al. teaches a powder (pulverulent material) that may contain a silanized silica (surface modified metallic oxide) where the silica is pyrogenically prepared. Hartmann et al. additionally teaches using (combining) the silanized silica with a fire-extinguishing agent (1:14-15, 40-45, and 55-56).

Claims 4-7, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann et al (US Pat. No. 5,959,005).

Regarding Claims 4 and 5: Hartmann et al. teaches a powder (pulverulent material) that may contain a silanized silica (surface modified metallic oxide) where the silica is pyrogenically prepared (1:14-15, 40-45, and 55-56).

Regarding Claim 6: Hartmann et al. further teaches that the silica is modified with hexamethyldisilazane (HMDS, $\text{NH}(\text{SiCH}_3)_2$) (2:15-21) which would attach to the silica alkylsilyl groups of a general formula $\text{SiC}_n\text{H}_{2n+1}$ where $n=1$.

Regarding Claim 7: Hartman further teaches that the silanized silica has the following properties: A specific surface area according to BET of 80-400 m^2/g , a primary (average) particle size of 7-40 nm, a pH value of 3-10, a carbon content of 0.1-15%, and a DBP number of <200%. The Office recognizes that all of the claimed physical properties are not positively taught by the reference, namely that the DBP number is at least 10% smaller than corresponding silanized silicas without structure modification. However, the reference teaches all the claimed ingredients and conditions. Therefore, the claimed physical properties would inherently be achieved by the disclosed composition.

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Regarding Claims 11 and 12: Hartmann et al. further teaches where the powder (pulverulent material) is a fire-extinguishing powder (1:55-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 8 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US Pat. No. 5,959,005) in view of Menon et al. (US Pat. No. 6,159,540).

Hartmann et al. teaches the composition of claim 5 as set forth above. Hartman et al. further teach a silanized silica with the following properties, a specific surface area according to

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BET of 80-400 m²/g, a primary (average) particle size of 7-40 nm, a pH value of 3-10, a carbon content of 0.1-15%, and a DBP number of <200% (1:15-25).

Hartmann et al. does not teach the composition where the alkylsilyl groups are dimethylsilyl or monomethylsilyl. However, Menon et al. teaches the use of dimethyldichlorosilane (DMDCS) and methyltrichlorosilane (MTCS) for functionalizing silica (3:25-35 and 3:54-4:7) which would give dimethylsilane and monomethylsilane functional groups on the silica. Hartmann et al. and Menon et al. are combinable because they are concerned with the same field of endeavor, namely functionalized silica. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the DMDCS and MTCS as taught by Menon et al. with the composition taught by Hartmann et al. and would have been motivated to do so because Menon et al. teaches that the polyfunctional silanes are economical and that the using recovered MTCS from waste streams is environmentally beneficial (4:1-7).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US Pat. No. 5,959,005) in view of Koehlert et al. (US Pat. No. 5,928,723).

Hartmann et al. teaches the composition of claim 4 as set forth above.

Hartmann et al. does not teach the composition where the pulverulent material is selected from the group of instant claim 10. However, Koehlert et al. teaches that surface modified metal oxides and organo-metal oxides may be combined with powders such as herbicides and insecticides (agricultural chemicals) (1:47-61). Hartmann et al. and Koehlert et al. are combinable because they are concerned with the same field of endeavor, namely surface

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modified metal oxides. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the herbicide and insecticide powders taught by Koehlert et al. with the modified silicas of Hartmann et al. and would be motivated to do so because Koehlert et al. teaches that surface modified metal oxides and organo-metal oxides act as free flow agents for the powders (1:55-60).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached form PTO-892.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter F. Godenschwager whose telephone number is (571) 270-3302. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PFG
September 19, 2007



MARK EASHOO, PH.D.
SUPERVISORY PATENT EXAMINER

21/ Sep/07